UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,607	01/27/2004	Hong Xu	100101-000200US	3423

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EXAMINER
PARK, JEONG S

ART UNIT	PAPER NUMBER
2154	

NOTIFICATION DATE	DELIVERY MODE
07/10/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/14/2008*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 17-22* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-10 and 17-22* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *27 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to communications filed April 14, 2008.

Specification

2.   The specification is objected to as failing to provide proper antecedent basis for

the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required:

Regarding claims 17 and 20-22, the term "computer-readable storage device" is

not properly supported within the specification.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-10 and 17-22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Milliken (U.S. Patent No. 6,978,384 B1) in view of Kuo (U.S. Patent

No. 6,987,981 B2).

Regarding claims 1, 17 and 20, Milliken teaches as follows:

a method for synchronizing the transfer of sequence numbers over a digital

network (methods and systems are provided for sequence number checking by

comparing the sequence numbers of data packets to a sliding window, see, e.g.,

abstract), wherein an expected sequence number (interpreted as a range of sequence

numbers in the sliding window) is compared to a received sequence number to

determine if the received sequence number is acceptable, wherein a sequence number is acceptable if it is within a group of sequence numbers defined with respect to the expected sequence number (sequence numbers of data packets are compared to a sliding window, wherein the sliding window indicates a range of sequence numbers considered valid, see, e.g., col. 3, lines 50-56), the method comprising:

sending a first sequence number (a first multiple level bit map representing a first sequence number of a first packet, see, e.g., col. 2, lines 29-42) to a receiver, wherein the receiver includes an unknown expected sequence number;

sending a second sequence number (a second multiple level bit map representing a second sequence number of a second packet received by the sequence number checker, see, e.g., col. 2, lines 29-42), wherein the first and second sequence numbers have values (used 32 bit sequence number which values between 0 and $2^{32}-1$, see, e.g., col. 7, lines 59-67) such that a subsequently sent starting sequence number is guaranteed to be accepted regardless of the value of the unknown expected sequence number;

sending the starting sequence number to cause resetting of the receiver to the starting sequence number (a method of maintaining a window of valid sequence numbers by comparing the received sequence numbers to the predefined window and moving the window range based on the comparison, see, e.g., col. 2, lines 43-50, therefore the subsequently sent next starting sequence number is inherently within the valid window range. Find more details of sliding window protocols in Computer Networks 3rd edition, Section 3.4, Tanenbaum, published by Prentice Hall PTR); and

two hosts (100 and 108 in figure 1) communicating over a public network wherein the hosts may be devices such as personal computers, workstations and servers (see, e.g., col. 4, lines 14-28), which inherently include at least one processor and a computer-readable storage device.

Milliken does not explicitly teach sending two sequence numbers to initiate resetting of sequence number at the receiver.

Kuo teaches as follows:

resetting sequence number between a sender and a receiver by sending 1st and/or 2nd reset PDU with sequence number to the receiver (see, e.g., col. 1, line 55 to col. 2, line 17 and figure 3).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Milliken with Kuo in order to efficiently reset sequence number between a sender and a receiver by sending reset PDU with starting sequence number.

Regarding claims 2 and 3, Milliken teaches as follows:

at least one of the sequence numbers (414 in figure 4) is transferred with associated data (payload 406 in figure 4), wherein the sequence number and associated data include a packet (data packet 400 in figure 4)(see, e.g., col. 7, lines 54-67).

Regarding claim 4, Milliken teaches as follows:

the sequence numbers have values within a predetermined range, wherein the range includes a minimum value and a maximum value (used 32 bit sequence number which values between 0 and $2^{32}-1$, see, e.g., col. 7, lines 59-67).

Regarding claims 5-10, Milliken teaches as follows:

sequence number and window size are determined based on various factors

such as end-to- end delay and transmission bandwidth (see, e.g., col. 1, line 51 to col.

2, line 25); and

used 32 bit sequence number which values between 0 and 2^{32}-1 (see, e.g., col.

7, lines 59-67), wherein 0 is the minimum value and 2^{32}-1 is the maximum value.

It would have been obvious for one of ordinary skill in the art at the time of the

invention to modify as follows:

Using 16 bits sequence number instead of 32 bits;

sending the first sequence numbers values one-third or one-half of the maximum

value; and

sending the second sequence number values two-thirds of the maximum or

maximum.

Regarding claims 18, 19, 21 and 22, Milliken in view of Kuo teach similar

limitations as claims 5-10 as presented above, therefore the limitations of claims are

met by Milliken in view of Kuo.

Response to Arguments

5.   Applicant's arguments filed 4/14/2008, with respect to claim 1-10 and 17-22 have

been considered but are moot in view of the new ground(s) of rejection.

A.   Summary of Applicant's Arguments

In the remarks, the applicant argues as followings:

1) the dependent claims recite specific values for word lengths (16) and ranges

of values for the sequence numbers. These values are not arbitrary, obvious or trivial.

When a sequence number is limited to 16 bits in high-speed transmission systems the

chance of errors due to long dropouts or packet loss intervals is an event that must be

corrected. The specific values that are proposed in the specification are an example of a

preferred embodiment that provides statistically better recovery and resetting than other

values might provide.

B.   Response to Arguments:

In response to argument 1), it is the claims that define the claimed invention, and

it is claims, not specifications that are anticipated or unpatentable. *Constant v.*

Advanced Micro-Devices Inc., 7 USPQ2d 1064.

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEONG S. PARK whose telephone number is (571)270-1597. The examiner can normally be reached on Monday through Friday 7:00 - 3:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. P./
Examiner, Art Unit 2154

July 7, 2008

/Joseph E. Avellino/
Primary Examiner, Art Unit 2146